

CLAIM STATUS:

Claims 1 - 15 (Cancelled).

16. (Previously presented) A modular measuring device, comprising:
a sensor module having a sensor compartment, in which a physical-to-electrical sensor is arranged;

an electronics module, having an electronics compartment, in which a measuring device electronics is arranged;

a first connecting element mounted on said electronics module and electrically connected with said measuring device electronics; and

a second connecting element mounted on said sensor module and electrically connected with said sensor;

wherein:

said sensor module and said electronics module are releasably, mechanically connected together, accompanied by the formation of a connecting compartment lying between said sensor compartment and said electronics compartment;

said two connecting elements are electrically, connected together, so that said measuring device electronics and said sensor are electrically coupled together; and

said two connecting elements, connected together, are accommodated in the connecting compartment formed between said sensor compartment and said electronics compartment;

at least one side wall of at least one of said two connecting elements includes at least one essentially straight groove and at least one side wall of said connecting compartment includes at least one, essentially straight projection corresponding with said groove of said connecting element; and the projection of said connecting compartment is received by said groove of said connecting element; and/or

at least one side wall of at least one of said two connecting elements includes at least one essentially straight projection and at least one side wall of said connecting compartment includes an essentially straight groove corresponding with the projection of said connecting element; and the projection of said connecting element is received by the groove of said connecting compartment.

17. (Previously presented) The measuring device as claimed in claim 16, wherein:

at least one of said two connecting elements is movably mounted.

18. (Previously presented) The measuring device as claimed in claim 16, wherein:

said two connecting elements are galvanically connected together.

19. (Previously presented) The measuring device as claimed in claim 16, wherein:

the connecting compartment is sealed fluid-tightly and/or pressure-tightly, relative to a surrounding atmosphere.

20. (Previously presented) The measuring device as claimed in claim 16, wherein:

at least one of said two connecting elements has electrically conductive, plug elements directed essentially in parallel with one another; and

the other of said two connecting elements has electrically conductive, socket elements directed essentially in parallel with one another and corresponding to said plug elements;

said plug elements are inserted into said socket elements and so contact said socket elements, that said sensor and said measuring device electronics are electrically connected together; and

said plug elements and said socket elements are directed essentially in parallel with said at least one groove of said connecting compartment and/or with the at least one projection of said connecting compartment.

21. (Previously presented) The measuring device as claimed in claim 20, wherein:

both said plug elements and said socket elements protrude into said connecting compartment.

22. (Previously presented) The measuring device as claimed in claim 20, wherein:

at least one of said plug elements and/or at least one of said socket elements is mounted laterally and/or rotatably movably within said connecting element of which it is a part.

23. (Previously presented) The measuring device as claimed in claim 18, wherein:

for preventing an erroneous assembly of said sensor module and said electronics module, the at least one projection of said connecting compartment and said connecting element groove corresponding with such are so arranged, that an installed position of said sensor module relative to said electronics module is uniquely determined.

24. (Previously presented) The measuring device as claimed in claim 18, wherein:

for preventing an erroneous assembly of said sensor module and said electronics module, the at least one groove of said connecting compartment and said connecting element projection corresponding with such are so arranged, that an installed position of said sensor module relative to said electronics module is uniquely determined.

25. (Previously presented) The measuring device as claimed in claim 16, further comprising:

an essentially ring-shaped seal, which is so arranged in said connecting compartment, that it laterally surrounds at least one of said two connecting elements and contacts with an external side at least one side wall of said connecting compartment.

26. (Previously presented) The measuring device as claimed in claim 25, wherein:

said seal is arranged coaxially, with the surrounded connecting element.

27. (Previously presented) The measuring device as claimed in claim 25, wherein:

said seal is arranged within said connecting compartment in the region of a peripheral gap in the side wall of said connecting compartment, and lying between said connecting element and side wall of said connecting compartment.

28. (Previously presented) The measuring device as claimed in claim 25, wherein:

said seal has on its outside, contacting the side wall of said connecting compartment, two sealing lips extending essentially in parallel with one another.

29. (Previously presented) The measuring device as claimed in claim 27, wherein:

said seal is so arranged in said connecting compartment that the two sealing lips extend essentially in parallel with said gap in the side wall of said connecting compartment.

30. (Previously presented) The measuring device as claimed in claim 29, wherein:

said seal is so arranged in said connecting compartment that said gap in the side wall of said connecting compartment extends essentially between the sealing lips of the seal.

31. (Previously presented) The measuring device as claimed in claim 26, wherein:

said seal is arranged concentrically with the surrounded connecting element.